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10/632,727	07/31/2003	James Colegrove	921207-96547	2776

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EXAMINER

BELLINGER, JASON R

ART UNIT PAPER NUMBER

3617

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,727

Applicant(s)

COLEGROVE, JAMES

Examiner

Jason R Bellinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 8-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/15/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Election/Restrictions

1. Applicant's election with traverse of the product made, drawn to claims 1-7 and 17, in the reply filed on 5 August 2004 is acknowledged.
2. Claims 8-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected method of making the elected product, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 5 August 2004.
3. Applicant's election of the product made, drawn to claims 1-7, and 17, in the reply filed on 5 August 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Information Disclosure Statement

4. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A (1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the wheel rim being formed from a fiber reinforced plastic, namely high modulus fibers, and the high modulus fibers being arranged in laminations of 0-45-90 degree alignments, as set forth in claims 1 and 17; the second laminations and first middle laminations forming quasi-isotropic walls due to the direction of the fiber orientation, as set forth in claim 4; three zero degree fiber bundles, as set forth in claims 5 and 17; and the wheel rim having flanges to receive a clincher type tire, as set forth in claim 7; must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 20, 32, 54, and 160. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "34" has been used to designate both a rim well and a braking surface (or rim sidewall portion). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the

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page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

Replacement Drawing Sheets

Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments, or remarks, section of the amendment. Any replacement drawing sheet must be identified in the top margin as "Replacement Sheet" (37 CFR 1.121(d)) and include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin.

Annotated Drawing Sheets

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheets must be clearly labeled as "Annotated Marked-up Drawings" and accompany the replacement sheets.

Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

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If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings MUST be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

Specification

8. The disclosure is objected to because of the following informalities: The term "fibre" should be replaced with the term --fiber-- throughout the specification. In line 2 of page 3, the term "know" should be replaced with the term --known--. In line 24 of page 4, the term "w hile" should be replaced with the term --while--. These corrections are for grammatical clarity and to correct minor spelling errors.

Appropriate correction is required.

Claim Objections

9. Claims 1-7 and 17 are objected to because of the following informalities: In line 1 of claim 1, the period (.) should be replaced with a colon (:). In line 10 of claim 1, it is suggested that the term --and-- be inserted after the term "strength".

It is suggested that the term --and-- be inserted after the term "walls" in line 4 of claim 17.

These corrections are for grammatical clarity.

Claims 1 and 4 are objected to due to the fact that method limitations are present in an apparatus claim. Method limitations receive little to no patentable weight in an apparatus claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

11. Claims 1-7 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is indefinite due to the fact the phrase "tends to" in lines 21-22 makes it unclear whether or not the tapered neck portion of the plugs actually centers the plugs.

Claim 2 is indefinite due to the fact that it is unclear what is actually being claimed in lines 8-10.

Claim 17 is indefinite due to the fact that it is unclear what is actually being claimed by the phrase "said rim having a section first and second walls" in line 4.

12. The phrase "more easily machinable" in claim 1 is a relative phrase that renders the claim indefinite. The phrase "more easily machinable" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In the instant case, it is unclear what material is being compared to to determine ease of machining.

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13. The term "slightly" in claim 2 is a relative term, which renders the claim indefinite. The term "slightly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In the instant case, it is unclear the extent in which the apexes of the rim are radiused.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lew ('313 B1) in view of Sacks and in further view of Lew et al ('839 B1). Lew ('313 B1) shows a wheel rim 20 formed of a fiber reinforced plastic having a structural portion, and left and right braking surfaces. The rim 20 is formed in a shape having a complex curvature with substantially uniform strength and density. The structural portion is formed predominantly of a high modulus fiber. The ratio of fibers to plastic is substantially above 60%. The rim 20 is formed of substantially identical semicircular halves (11 & 12). The first half 11 includes a male plug 22 at one end and a female receptacle at the opposite end; both ends being separated by an arc portion. The second half 12 has the same configuration as the first half 11. The rim 20 is assembled

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by matingly interconnecting and adhesively bonding the first plug 22 with the second female receptacle, and the second plug 22 with the first female receptacle.

The rim 20 includes a tire well extending between left and right apexes. The apexes have a radius. The braking surfaces extend downwardly from the apexes. The tire well is smoothly curved to receive a tire. While Lew ('313 B1) does not specify the size tire that may be mounted on the rim, however one of ordinary skill in the art at the time of the invention would find it obvious to mount a tire properly sized to fit on the rim.

Lew ('313 B1) does not specify that the plugs include a tapered neck portion. Sacks teaches the use of plugs (40 & 42) for attaching ends 20 of a rim 12 together, wherein the plugs (40 & 42) include tapered neck portion 44 that function to center the plug with respect to a female receptacle 34, and preserve an adequate adhesive coating. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the plugs of Lew ('313 B1) with tapered neck portions to allow the rim sections to be properly aligned and securely connected.

Lew ('313 B1) as modified by Sacks does not disclose that the high modulus fibers are aligned in laminations formed of a series of 0-45-90 degree alignments. Lew et al teaches the formation of a fiber reinforced plastic rim 10 being formed with the fibers aligned in laminations formed of a series of 0-38-90 degree alignments. However, it is stated that the 38 degree lamination is only preferred, but does not exclude a 45 degree lamination instead. Therefore from this teaching, it would have been obvious to

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one of ordinary skill in the art at the time of the invention to form the rim of Lew ('313 B1) as modified by Sacks from a series of laminations with fibers in 0-45-90 degree alignments for the purpose of providing a rim capable of withstanding various forces (sheer, tension, compression, etc) experienced during operation.

Lew ('313 B1) as modified by Sacks also does not show the braking surfaces being substantially flat, and joining left and right walls that further join a spoke bed. Lew et al ('839 B1) teaches the use of a rim 10 having substantially flat braking surfaces (30a & 30b) that join right and left walls that further join a spoke bed 32. While, Lew et al does not specify dimensions of the walls of braking surfaces, it would be obvious to one of ordinary skill in the art to form these sections of the rim with dimensions suitable for proper strength and function of the rim. Lew et al also does not specify that the braking surface is formed of a material "more easily machinable" than that of the rest of the rim. However, if you have been obvious to one of ordinary skill at the time of the invention to form the brake surfaces out of a material capable of being machined for the purpose of allowing the application of a wear resistant material to the brake surfaces, providing an aesthetically pleasing rim surface, etc.

Therefore from these teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the rim of Lew ('313 B1) as modified by Sacks to have the configuration as taught by Lew et al for the purpose of providing more surface area to engage the brakes, thus shortening the stopping distance of the when in use.

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16. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lew ('313 B1) in view of Sacks and Lew et al ('839 B1) as applied to claims 1-2 above, and further in view of Chen. Lew as modified by Sacks and Lew et al does not show unidirectional circular reinforcing bundles located between laminations at the apexes and spoke bed of the rim. Chen teaches the use of unidirectional circular reinforcing bundles 321 and 363 located at the apexes and spoke bed, respectively of a rim. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide reinforcing bundles at the apexes and spoke bed of the rim of Lew as modified by Sacks and Lew et al for the purpose of providing additional structural reinforcement to the rim to prevent torsional or lateral distortion.

Allowable Subject Matter

17. Claims 3-7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references are considered to show laminated rims. For example, Jones shows a laminated rim.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R Bellinger whose telephone number is 703-308-6298. The examiner can normally be reached on Mon - Thurs (9:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason R Bellinger
Examiner
Art Unit 3617


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